

Claim

PIUS062005

1. An extraction method, wherein it comprises the flowing steps:
crushing and soaking the raw material, and then extracting, wherein the extracting step is carried out under a 18~33 kHz nonlinear vibration, using water as solvent, under the pressure of 25~35MPa and at the temperature of 0~50°C, thus obtaining a extract which contains the active components of the raw material.
2. An extraction method of claim 1, wherein the extraction temperature is 20°C~50°C.
3. An extraction method of claim 1, wherein the extraction time is 1~3 hours.
4. An extraction method of claim 1, wherein the ratio of raw material to water solvent by weight is 1:3~5.
5. An extraction method of claim 1, wherein the raw material is Chinese traditional medicine or plant.
6. An extraction method of claim 1, wherein said method further includes the step of carrying out the direct liquid package to the said extraction liquid.
7. An extraction method of claim 1, wherein said method further includes the steps of the concentrating and drying the said extraction liquid.
8. An extraction apparatus comprising: an extracting can comprising a can body and a top lid, a sealing structure to seal the can body and the top lid, and a pipeline connection to input the water into the can body and output the extraction liquid; wherein said apparatus further comprises a high pressure pump, which is linked to the extracting can and maintain the high pressure in the extracting can under 100MPa; wherein a raw material can and a nonlinear vibration apparatus emitting nonlinear vibration with the frequency in the range of 18KHz~33KHz are set in the inner of extracting can; wherein said top lid is equipped witt a conducting line-connecting hole and a vent hole connected with a seal valve to connect said nonlinear vibration apparatus with the external electrical source; wherein a water-supplying system is connected with said water-inputting pipe

connection to input the water to said extracting can; wherein a material pump and a material liquid is connected to the extracting can through the extraction liquid-outputting pipe connection.

9. An extraction apparatus of claim 8, wherein said nonlinear vibration apparatus is a string of nonlinear vibration apparatus consisting of many vibration apparatuses emitting nonlinear vibration, with the axes of the adjacent nonlinear vibration apparatus perpendicular in different surfaces with each other, wherein said nonlinear vibration apparatus has two proximate ends with outputting curve surface and a vibrating slice set between the two proximate end, and a insulation layer is set outside of the vibrating slice, and a conducting line connects the vibrating slice with the external electrical resource of the extracting can.

10. An extraction apparatus of claim 8 or 9, wherein said raw material can is a cylindrical bracket enwrapped with filter cloth bag, and there is a hook set in the center of the bracket top to hang the nonlinear vibration apparatus.

11. An extraction apparatus of claim 8 or 9, wherein said sealing structure is the collar and a seal washer between the can body and the top lid, wherein said can body is also equipped with circulating pump externally to circulate the liquid in the extracting can.

12. An extraction apparatus of claim 8 or 9, wherein the extracting can is further equipped with a temperature-controlling apparatus externally, to maintain the temperature in the range of 20°C~50°C.

13. An extraction apparatus of claim 12, wherein said temperature-controlling apparatus is a heating-and-warming layer equipped on the external of extracting can.

14. An extraction apparatus of claim 8 or 9, wherein said water-supplying system has a water-processing machine and a water pump to inputting liquid into the extracting can.

15. An extraction apparatus of claim 8 or 9, wherein said extracting can be connected with a material pump and a material liquid can through the pipeline

interface outputting extraction liquid.

16. An extraction apparatus of claim 11, wherein said circulating pump is magnetic pump.

17. An extraction apparatus of claim 8 or 9, wherein the sealing valve is further connected with an air compressor.

18. An extraction apparatus of claim 8, wherein said apparatus further has a concentrating system connected with the material liquid can.

19. An extraction apparatus of claim 18, wherein said concentrating system is a supersonic atomization apparatus comprising the air-filtrating machine set on the top, a atomization room on the middle part, a gas-gathering room and gas-outputting fan set under the atomization room, wherein there is a plural of supersonic generators set in the atomization room, and a liquid-inputting hole inputting the extraction liquid and liquid-outputting hole outputting the concentrated liquid set on the side wall of the atomization room.